

Recombinant Human UDP-N-acetylglucosamine--peptide N-acetylglucosaminyltransferase 110KDA subunit(OGT),partial

Catalog No: #AP70606

Package Size: #AP70606-1 20ug #AP70606-2 100ug #AP70606-3 1mg

Description

Product Name	Recombinant Human UDP-N-acetylglucosamine--peptide N-acetylglucosaminyltransferase 110KDA subunit(OGT),partial
Host Species	E.coli
Purification	Greater than 90% as determined by SDS-PAGE.
Immunogen Description	Expression Region:606-1022aaSequence Info:Partial
Other Names	O-GlcNAc transferase subunit p110O-linked N-acetylglucosamine transferase 110KDA subunit ;OGT
Accession No.	O15294
Calculated MW	62.5 kDa
Tag Info	N-terminal 6xHis-SUMO-tagged
Target Sequence	MAEANHFDLSQIPCNGKAADRIHQDGIHILVNMNGYTKGARNELFALRPAPIQAMWLGYPGTSGALFMDYIITD QETSPAEEVAEQYSEKLAYMPHTFFIGDHANMFPHLKKKAVIDFKSNGHIYDNRIVLNGIDLKAFDLSLPDVKIVK MKCPDGGDNADSSNTALNMPVIPMNTIAEAVIEMINRGQIQITINGFSISNGLATTQINNKAATGEEVPRTIIVTTR SQYGLPEDAIVYCNFNQLYKIDPSTLQMWANILKRVPSVLWLLRFAVGEPNIQYQAQNMGLPQNRIIFSPVA PKEEHVRRGQLADVCLDTPLCNGHTTGMDVLWAGTPMVTMPGETLASRVAASQLTCLGCLELIAKNRQEYE DIAVKLGTDLEYLKKVRGKVKQRISSPLFNTKQYTMELERLYLQ
Formulation	Tris-based buffer50% glycerol
Storage	The shelf life is related to many factors, storage state, buffer ingredients, storage temperature and the stability of the protein itself. Generally, the shelf life of liquid form is 6 months at -20°C,-80°C. The shelf life of lyophilized form is 12 months at -20°C,-80°C.Notes:Repeated freezing and thawing is not recommended. Store working aliquots at 4°C for up to one week.

Background

Catalyzes the transfer of a single N-acetylglucosamine from UDP-GlcNAc to a serine or threonine residue in Cytoplasmic domain and nuclear proteins resulting in their modification with a beta-linked N-acetylglucosamine (O-GlcNAc). Glycosylates a large and diverse number of proteins including histone H2B, AKT1, EZH2, PFKL, KMT2E,MLL5, MAPT,TAU and HCFC1. Can regulate their cellular processes via cross-talk between glycosylation and phosphorylation or by affecting proteolytic processing. Involved in insulin resistance in muscle and adipocyte cells via glycosylating insulin signaling components and inhibiting the 'Thr-308' phosphorylation of AKT1, enhancing IRS1 phosphorylation and attenuating insulin signaling. Involved in glycolysis regulation by mediating glycosylation of 6-phosphofructokinase PFKL, inhibiting its activity . Component of a THAP1,THAP3-HCFC1-OGT complex that is required for the regulation of the transcriptional activity of RRM1. Plays a key role in chromatin structure by mediating O-GlcNAcylation of 'Ser-112' of histone H2B: recruited to CpG-rich transcription start sites of active genes via its interaction with TET proteins (TET1, TET2 or TET3) . As part of the NSL complex indirectly involved in acetylation of nucleosomal histone H4 on several lysine residues . O-GlcNAcylation of 'Ser-75' of EZH2 increases its stability, and facilitating the formation of H3K27me3 by the PRC2,EED-EZH2 complex . Regulates circadian oscillation of the clock genes and glucose homeostasis in the liver. Stabilizes clock proteins ARNTL,BMAL1 and CLOCK through O-glycosylation, which prevents their ubiquitination and subsequent degradation. Promotes the CLOCK-ARNTL,BMAL1-mediated transcription of

genes in the negative loop of the circadian clock such as PER1,2 and CRY1,2

References

O-GlcNAcylation regulates EZH2 protein stability and function. Chu C.S., Lo P.W., Yeh Y.H., Hsu P.H., Peng S.H., Teng Y.C., Kang M.L., Wong C.H., Juan L.J. Proc. Natl. Acad. Sci. U.S.A. 111:1355-1360(2014) Research Topic: Neuroscience

Note: This product is for in vitro research use only and is not intended for use in humans or animals.